## NORTH CAROLINA APPROVED SPEED MEASURING INSTRUMENT LIST

- 1. In addition to other restrictions listed in this document, all speed measuring instruments submitted for approval after 01 March 2017, are made subject to and restricted as follows:
  - a. Instrument must be constructed in a manner that is user friendly and rugged enough to meet the rigors of law enforcement demands. Instruments with moving mode capabilities must be designed to offer minimal distraction to the operator while operating in a moving mode. (Examples of user friendliness include, but is not limited to; presence of a simplified menu [if necessary for operation], ease of tuning fork testing and obtaining the results, displays that are easily read by the operator in both day and night condition, etc.) All vendors/manufacturers are encouraged to seek 'user-friendliness' clarification from the SMI Advisory Committee Chairman concerning their nomenclature prior to submission of their device for evaluation.
  - b. All instrument light segment tests must display only "8" or "8." in <u>each</u> segment of each speed, distance, range, and time display windows for a minimum of three seconds. Each segment of each window must be uniform with one another. (For example; an appropriate light test for <u>three</u> segment target, target lock, and patrol speed 'windows' is for all of them to show simultaneously "888" in each of the 'windows', or, "8.8.8." in each of the 'windows' for the minimum required time of three seconds. Furthermore, if the instrument has four segment 'windows', the target, target lock, and patrol speed windows shall show "8888" or "8.8.8." across all windows simultaneously for the minimum required time of three seconds. The same methodology shall be applied to Time-Distance and LIDAR instruments, with each window containing the same uniform manner of testing the segments for each window on the faceplate.) During the light segment test of "8" or "8." in each segment of all speed, distance, range, and time display windows, all fixed/permanent icons and indicators on the control box must also illuminate/display simultaneously with the light segment test for the minimum three second time period. All vendors/manufacturers are encouraged to seek 'light segment testing' clarification from the SMI Advisory Committee Chairman concerning their nomenclature <u>prior to</u> submission of their device for evaluation.
  - c. Instrument must perform a test of all light segments and internal circuitry during power up (see b & e).
  - d. Instrument must have only one button/switch which allows the operator to manually test all light segments and the internal circuitry at any time during operation. This test must be an exact duplication of the power up test (as specified in b and e).
  - e. An internal circuitry test must immediately and automatically follow all light segment tests. All instrument internal circuitry tests must only display "PAS" or "PASS" upon completion of the test to indicate the instrument passed the test. If the instrument does not pass the test, it must only display "FAIL" or "ERR" in the target display window(s). No other words, numbers, or indicators shall display or appear prior to, during, or upon completion of, the internal circuitry test. All vendors/manufacturers are encouraged to seek 'internal circuitry testing' clarification from the SMI Advisory Committee Chairman concerning their nomenclature prior to submission of their device for evaluation.
  - f. Instrument must not be capable of clocking front and rear targets simultaneously, lock more than one speed at a time, or have more than three speed display windows. (For example, only one target speed window, one target lock speed window, and one patrol speed window is permitted on the display for the instrument.)
  - g. Instrument must not have a fastest vehicle mode feature or any indicator of same on the instrument or remote.
  - h. RADAR and LIDAR instruments must not have a time-distance/stopwatch mode feature or any indicator of same on the instrument or remote
  - i. Instrument must not have an automatic mode switching feature.
  - j. Instrument must default to off if the power is lost during operation.
  - k. RADAR and LIDAR Instruments shall have a volume control which must not be capable of being muted.
  - 1. If an instrument possesses a mode or feature, which has not been previously reviewed and approved for use in North Carolina, such instrument is subject to be recommended for approval only after the mode or feature receives a favorable review by the SMI Advisory Committee. A "mode" or "feature" is defined as having <u>any</u> technology programmed into the software or operating system, or, built onto the instrument hardware that can be utilized during the operation of the instrument by the operator and/or instructor. A vendor/manufacturer must notify the Chairman of the SMI Advisory Committee to clarify if a "mode" or "feature" must first be tested and approved, and shall arrange a testing session of the new "mode" or "feature" prior to submitting the instrument for evaluation and/or approval to the Program Administrator. Additionally, any instrument vendor/manufacturer that wishes to modify, revise, and/or add a "mode" or "feature" to an instrument already approved must first seek approval prior to marketing or selling any instrument as it changes the operation of the instrument initially tested and approved for use. The vendor/manufacturer may seek approval by contacting the Chairman of the SMI Advisory Committee and

- seeking further guidance.
- m. Instruments approved for use after January 1, 2006 will be marked by an "\*" on the approved list.
- n. Instruments marked with double asterisks "\*\*" indicate the instrument is on the staggered deletion list. Refer to section 8 of this Appendix for removal date of the instrument.
- o. Instruments must have a feature to cut the instrument on and off as a button or function of the nomenclature.
- p. Instruments approved for use after March 1, 2017 will be marked with triple asterisks "\*\*\*" on the approved list.
- 2. All approved RADAR/LIDAR speed measuring instruments are made subject to and restricted as follows:
  - a. The instrument shall not have any automatic violation alarms (audio and/or visual) or automatic locking functions that occur prior to the instrument being manually locked by the operator. This does not include "auto-test" features.
  - b. The instrument shall not have a high speed lock function.
  - c. The instrument shall not have an external control that would permit the adjustment or correction of the zero or calibration readings.
  - d. The instrument shall not have a feature and/or function which compensates for any angle (cosine effect) that may be present between the target vehicle and the RADAR antenna or LIDAR.
  - e. RADAR instruments shall be capable of being tested for accuracy by use of a tuning fork.
  - f. RADAR instruments shall have a squelch control.
  - g. RADAR instruments shall have a radio frequency interference feature that disables the instrument when radio frequency interference is present.
  - h. The instrument shall have a low voltage feature/indicator.
  - i. The instrument shall be designed to be manually activated, by the operator, upon the presence of a violator vehicle.
- 3. All approved time-distance speed measuring instruments are made subject to and restricted as follows:
  - a. The instrument shall not be capable of accepting double time or double distance into the computer.
  - b. The instrument shall be designed to be manually activated, by the operator, upon the presence of a violator vehicle.
- 4. The following modes, functions, and/or configurations shall not be used on RADAR, LIDAR, or time-distance instruments unless the operator is certified in its use by the North Carolina Criminal Justice Education and Training Standards Commission: (Revised: June 1, 2016)
  - a. Single Antenna

- c. Dual Antennae
- b. Stationary Mode (RADAR and/or LIDAR)
- d. Moving-Opposite Direction Mode

e. Moving-Same Direction Mode

- f. Basic configuration Time-Distance clocks
- \* The following modes/features/technology are NOT permissible for use on any instrument, and may not have any indication of such features displayed on the faceplate or remote, or have any function of such for an instrument approved for use after January 1, 2006; "Time-Distance and/or Stopwatch" features on RADAR, "Fastest Vehicle" mode, "Automatic Mode Switching" feature, "Safety Zone" feature, "Bluetooth" feature, "Chase" mode, "Following Too Close" feature, "Annual Test for Accuracy Reminder" feature, "Guided Tuning Fork Test" feature, and "Time Trak" feature on RADAR/LIDAR shall NOT be used; "Obstruction" mode, "Windshield" mode, "Anti-jamming" mode, and "Jammer Reject" mode on LIDAR instruments shall NOT be used. Speed measuring instruments shall NOT possess a feature that will allow the internal storing of a violator speed measurement which allows for recall of the speed by the operator after it is cleared from the locked position; additionally, an instrument shall not possess a remote display(s) or control(s) which was not approved for use during the evaluation process as part of the instrument nomenclature. These types of features shall NOT be used on RADAR, Time Distance, and/or LIDAR.
- \* "Exclusive Quick Trak" feature, "POP" feature (where the displayed speeds are not lockable), "School Zone" mode, "Ranging" feature, and "Stats" mode (where the data is not recallable or displayable on the instrument itself) technology is approved for use on instruments approved on or after January 2006.
- \* Any mode/feature/function/configuration not listed above is to be considered <u>untested and subject to review prior</u> to instrument application.

- \* For moving mode operations, a "certified" patrol vehicle speedometer <u>is not required</u> effective June 1, 2012.
- 5. North Carolina Approved RADAR Speed Measuring Instruments (Revised: June 1, 2017)

(Note: See section 8 of this appendix.) The following RADAR instruments are approved for use provided they are operated in compliance with (1) and (2) above:

<u>Manufacturer</u>	<u>Model</u>	Mode
01. Applied Concepts, Inc.	Stalker DUAL SL	M/S
02. Applied Concepts, Inc.	Stalker DUAL DSR	M/S
03. Applied Concepts, Inc.	Stalker Dual DSR-E*	M/S
04. Applied Concepts, Inc.	Stalker Basic	M/S
05. Applied Concepts, Inc.	Stalker II SDR*	S
06. Applied Concepts, Inc.	Stalker II MDR*	M/S
07. Applied Concepts, Inc.	Stalker Dual E*	M/S
08. Applied Concepts, Inc.	Stalker Patrol*	M/S
09. Decatur Electronics, Inc.	Genesis II Select-Directional*	M/S
10. Decatur Electronics, Inc.	Genesis II Select*	M/S
11. Decatur Electronics, Inc.	Genesis Handheld Directional (GHD)*	S
12. Decatur Electronics, Inc.	Scout*	S
13. Kustom Signals, Inc.	HR-12	M/S
14. Kustom Signals, Inc.	Falcon	S
15. Kustom Signals, Inc.	Golden Eagle	M/S
16. Kustom Signals, Inc.	Golden Eagle II*	M/S
17. Kustom Signals, Inc.	Directional Golden Eagle II*	M/S
18. Kustom Signals, Inc.	Raptor RP-1*	M/S
19. Kustom Signals, Inc.	Directional Talon*	M/S
20. Kustom Signals, Inc.	Talon II*	M/S
21. Kustom Signals, Inc.	Falcon HR*	M/S
22. MPH Industries, Inc.	BEE III	M/S
23. MPH Industries, Inc.	Enforcer	M/S
24. MPH Industries, Inc.	Z-25 / Z-35	S
25. MPH Industries, Inc.	Python III*	M/S
26. MPH Industries, Inc.	Speedgun	M/S
27. MPH Industries, Inc.	Ranger EZ*	M/S
28. MPH Industries, Inc.	Speedgun Pro*	M/S

6. North Carolina Approved LIDAR Speed Measuring Instruments (Revised: June 1, 2016)

(Note: See section 8 of this appendix.) The following LIDAR instruments are approved for use, provided they are operated in compliance with (1) and (2) above:

<u>Model</u>	Mode
Stalker LIDAR LR	S
Stalker LIDAR XS*	S
Stalker LIDAR XLR*	S
Speed LIDAR*	S
Compact Speed*	S
ProLaser III	S
ProLaser 4	S
Ultralyte 200 LR*	S
Ultralyte LR B*	S
TruSpeed LR*	S
TruSpeed S*	S
	Stalker LIDAR LR Stalker LIDAR XS* Stalker LIDAR XLR* Speed LIDAR* Compact Speed* ProLaser III ProLaser 4 Ultralyte 200 LR* Ultralyte LR B* TruSpeed LR*

7. North Carolina Approved Time-Distance Speed Measuring Instruments (Revised: June 1, 2016)
(Note: See section 8 of this appendix.) The following time-distance instruments are approved for use, provided they are operated in compliance with (1) and (3) above:

ManufacturerModelMode01. Kustom Signals, Inc.TrackerM/S02. YIS/Cowden Group, Inc.V-Spec (with/without remote)\*M/S

8. North Carolina is committed to providing law enforcement agencies with various instrument choices that are standardized, available for repair, and has the latest cutting-edge technology proven to be reliable during testing. Due to this commitment, it requires us to revise the "Approved for Use" list as necessary on occasion to ensure the instruments meet our objective. (Reviewed: June 1, 2017)

The following speed measuring instruments will be <u>automatically removed</u> from the "Approved for Use" list on the effective date shown for that particular instrument.

Manufacturer Model Mode DATE OF REMOVAL
None at this Time